The opinion in support of the decision being entered today
was **not** written for publication and
is **not** binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ZHEN LIU, MARK S. SQUILLANTE and
JOEL LEONARD WOLF

MAILED

JAN 25 2007

U.S. PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS
AND INTERFERENCES

Appeal No. 2006-2541
Application No. 09/832,438
Technology Center 3600

ON BRIEF

Before CRAWFORD, LEVY and NAPPI, **Administrative Patent Judges.**

NAPPI, **Administrative Patent Judge.**

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 of the final rejection of claims 1, 3 through 15, 17 through 29 and 31 through 42. For the reasons stated *infra* we will not sustain the Examiner's rejections of claims 1, 3 through 15, 17 through 29 and 31 through 42. However

pursuant to 37 CFR § 41.50(b), we enter a new grounds of rejection against claims 1, 3 through 15, 17 through 29 and 31 through 42.

THE INVENTION

The invention relates to a method of maximizing service-level-agreement profits for servers of a Web server farm. See page 3 of Appellants' specification. Claim 1 is representative of the invention and is reproduced below:

> 1. A method in a data processing system of allocating resources of a computing system to hosting of a data network site to thereby maximize generated profit, comprising:
>
> calculating a total profit for processing requests received by the computing system for the data network site based on at least one service level agreement; and
>
> allocating resources of the computing system to maximize the total profit, wherein calculating a total profit includes, for each request received by the computing system for the data network site, determining whether processing of the request generates a revenue or a penalty, wherein a revenue is generated when an allocation of resources is such that the request is processed in accordance with the service level agreement and a penalty is generated when the allocation of resources is such that the request is not processed in accordance with the service level agreement, and wherein the total profit is obtained by subtracting the penalty from the revenue for each request.

THE REFERENCES

The references relied upon by the Examiner are:

Smith US 2002/0091854 A1 Jul. 11, 2002

Pappalardo, Denise, "ISPs Continue to Improve Internet Access SLAs"; Network World, Vol. 18, Iss. 8. (Feb. 19, 2001) p. 25

THE REJECTIONS AT ISSUE

Claims 1 and 3 through 14 stand rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. The Examiner's rejections are set forth on pages 3 through 5 of the Examiner's Answer. Claims 1, 3 through 15, 17 through 29 and 31 through 42 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Smith in view of Pappalardo. The Examiner's rejections are set forth on pages 5 through 9 of the Examiner's Answer. Throughout the opinion we make reference to the Briefs and the Answer for the respective details thereof.

OPINION

We have carefully considered the subject matter on appeal, the rejections advanced by the Examiner and the evidence of obviousness relied upon by the Examiner as support for the rejections. We have, likewise, reviewed and taken into consideration, in reaching our decision, Appellants' arguments set forth in the Briefs along with the Examiner's rationale in support of the rejections and arguments in rebuttal set forth in the Examiner's Answer.

With full consideration being given to the subject matter on appeal, the Examiner's rejections and the arguments of Appellants and the Examiner, for the reasons stated *infra* we will not sustain the Examiner's rejection of claims 1 and 3 through 14 under 35 U.S.C. § 101 or the Examiner's rejection of claims 1, 3 through 15, 17 through 29 and 31 through 42 under 35 U.S.C. § 103(a). However, we enter a new grounds of

rejection pursuant to 37 CFR § 41.50(b) against claims 1, 3 through 15, 17 through 29 and 31 through 42 under 35 U.S.C. § 112, second paragraph.

Rejection of claims 1 and 3 through 14

under 35 U.S.C. § 101.

Appellants argue, on pages 10 and 11 of the Brief, that independent claim 1's recitation of calculating a profit for processing requests is a concrete and tangible result. On page 11 of the Brief, Appellants argue that independent claim 1 recites a "practical application by allocating computing system resources based upon whether a revenue or penalty is generated by each processing request and not 'merely manipulate an abstract idea' as the Examiner alleges." Appellants, thus conclude that independent claim 1 recites statutory subject matter as it recites a method which produces concrete, useful and tangible results.

On page 9 of the Answer, the Examiner states:

> In order for allocating to be statutory the result would require the physical distribution of resources and not the simple act of assigning which resources are to be operated, which may be carried out mentally without any useful, concrete or tangible result. The Appellant's [sic] specification lacks a definition that would otherwise state allocating to be anything other than the mental assigning of which resource to be operated.

We disagree with the Examiner's rationale. The standard for reviewing claims for statutory subject matter is set forth in the Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility (1300 *Off. Gaz. Pat. Office* 142 (Nov. 22, 2005)). The guidelines first require a determination as to whether the claims as a whole are directed

to nothing more than abstract ideas, natural phenomena, or laws of nature. Clearly, claim 1 recites neither a natural phenomena nor a law of nature, so the issue is whether they are directed to an abstract idea. We note that it is generally difficult to ascertain whether a process is merely an abstract idea, particularly since claims are often drafted to include minor physical limitations such as data gathering steps or post-solution activity. Claim 1 recites a method performed in a data processing system and as such recites machine-implemented steps. However, the question is whether the claim *as a whole* recites nothing more than abstract ideas. If the claim is considered to be an abstract idea, then the claim is not eligible for and, therefore, is excluded from patent protection. If not, then the next step set forth in the guidelines is to determine whether the claimed invention is directed to a practical application of an abstract idea, law of nature, or natural phenomenon. Again the claim involves neither a law of nature nor natural phenomenon, so the issue is whether it is directed to a practical application of an abstract idea. The guidelines indicate that either a transformation of physical subject matter to a different state or thing or the production of a useful, concrete, and tangible result equates to a practical application of an abstract idea. We note that the useful, concrete, and tangible result test was set forth in *State Street Bank & Trust Co. v. Signature Finance Group, Inc.*, 149 F.3d 1368, 1373; 47 USPQ2d 1596, 1601 (Fed. Cir. 1998), in the context of a machine implemented process. Independent claim 1 recites a step of allocating resources of the computer system to maximize profits, which are generated in response to requests for service. Appellants'

specification, on pages 9 and 10, discusses allocation of resources as determining which requests are actually served by servers. Thus, the scope of claim 1 includes allocating resources (servers) to process requests and the processing of the request is a tangible result. Accordingly, we find that claim 1 recites steps that produce a concrete, useful and tangible result. The Examiner's rejection of claims 1 and 3 through 14 under 35 U.S.C. § 101 is not sustained.

Rejection of claims 1, 3 through 15, 17 through 29 and 31 through 42 under 35 U.S.C. § 103(a)

Appellants argue, on page 14 of the Brief, that Smith teaches a system where a service provider receives a tiered percentage commission of the commercial transaction based upon the amount of network traffic and that the resources are allocated on an as needed basis in response to current demand. Appellants argue that this is in contrast to Appellants' claimed invention which calculates profit for processing requests received by the computing system based upon a service level agreement, wherein the calculation includes, for each request, penalties if the service level agreement is not met and profits if the service level agreement is met. On page 15 of the Brief, Appellants assert that in the claimed invention, allocation of resources is based upon economic factors for each request whereas Smith teaches that allocation of resources is based upon performance factors. On page 17 of the Brief, Appellants argue that Pappalardo does not teach or suggest allocating resources of a computing

system to maximize profit, nor does Pappalardo teach or suggest determining a revenue or penalty for each request as recited in claim 1.

In response the Examiner, states on page 10 of the Answer that Smith teaches allocating resources based upon demand and Pappalardo teaches improving service levels by penalizing service providers if the agreed upon service level is not met. Further, on pages 10 and 11 of the Answer:

> Examiner notes that Smith discloses allocating servers and resources on an as-needed basis to the web sites and applications of the business in response to the immediate demand for Internet access to those web sites and applications. Examiner further notes that "as-needed' is interpreted to mean many reasons. For example, the fundamental principle of business is to maximize profit. The greater demand for Internet access in Smith would generate additional profit for the service provider and therefore allocating resources to meet the greater demand would maximize profit. Moreover, Smith discloses that the business is not locked into a given capacity, according to their service level agreement, therefore it is not necessary for the business to waste scarce financial resources by scaling its service capacity in order to handle a small number of peak access times. When the service provider allocates resources to meet the greater demand by the business, the service provider increases profit by charging for the additional resources (Para. 13-16).

Further, the Examiner states, on page 11 of the Answer, that Smith is not relied upon to teach allocating resources based upon whether each request received generates revenue or penalty. Rather, on pages 12 and 13 of the Answer, the Examiner states that Pappalardo teaches penalties, credits to the user, if service level agreements are not met and that service providers allocate resources in order to meet service level agreements in order to

refrain from issuing credits to customers. The Examiner concludes on page 13 of the Answer, that:

> [T]he Smith reference discloses calculating profit for the service provider and allocating resources to maximize profit (Paras. 13-16); while the Pappalardo reference teaches determining if the business request generates a profit or a penalty for the service provider (Entire Document). Therefore, when combined, the Smith and Pappalardo references teach each of the limitations of the Appellant's [sic] invention.

We disagree with the Examiner's rationale. Initially, we note that each of independent claims 1, 15 and 29 contain an ambiguity and therefore pursuant to 37 C.F.R. § 41.50(b) we enter a new ground of rejection under 35 U.S.C. §112 second paragraph, as the scope of the claim cannot be fully determined. Specifically, Claim 1 recites "wherein calculating a total profit includes, for each request received by the computing system for the data network site, determining whether processing of the request generates a revenue or a penalty, wherein revenue is generated when an allocation of resources is such that the request is processed in accordance with the service level agreement and a penalty is generated when the allocation of resources is such that the request is not processed in accordance with the service level agreement." Thus, claim 1 recites that for each request a determination is made as to whether the request will generate a profit or a revenue, i.e. one request generates one or the other but not both. However, claim 1 further recites "wherein the total profit is obtained by subtracting the penalty from the revenue for each request" which contradicts the earlier limitation as it implies that for a request both a profit and a penalty are generated.

Independent claims 15 and 29 contain similar limitations. Thus, we are not able to ascertain the scope of the claims and we now reject claims 1, 3 through 15, 17 through 29 and 31 under 35 U.S.C. §112 second paragraph. Also, as we are unable to ascertain the scope of the claims we will not sustain the Examiner's rejection of the claims under 35 U.S.C. §103. See *In re Steele* 305 F.2d 859, 134 USPQ 292 (CCPA 1962) (it is wrong to rely upon speculative assumptions as to the meaning of claims and basing a rejection under 35 U.S.C. §103 thereupon).

Nonetheless, inasmuch as Appellants intended the independent claims to be commensurate with the specification, which on page 10 makes clear that the total profit is obtained by subtracting all of the penalties from all of the revenue generated, we do not find that the combination of the references teach the claimed invention of allocating resources. We do not find that the combination of Smith and Pappalardo teach allocating resources to respond to requests to maximize profits where profits are calculated based upon revenue for meeting service level agreements or a penalty if the service level is not met. Smith teaches allocation of resources in response to demand, and that a tiered rate schedule is used to determine the payment received for the service. While this tiered rate schedule will generate increasing profits as more resources are made available to meet the demand, it is the demand for service, not the maximization of profits that determines allocation of resources. Further, we find that Pappalardo teaches that there are rate structures, which provide penalties to the service providers if the

service level is not met. However, Pappalardo does not teach how allocation of resources is determined for individual requests.

For the forgoing reasons, we will not sustain the Examiner's rejection of claims 1, 3 through 15, 17 through 29 and 31 under 35 U.S.C. §103.

This decision contains a new ground of rejection pursuant to 37 CFR § 41.50(b) (effective September 13, 2004, 69 Fed. Reg. 49960 (August 12, 2004), 1286 Off. Gaz. Pat. Office 21 (September 7, 2004)). 37 CFR § 41.50(b) provides "[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review."

37 CFR § 41.50(b) also provides that the Appellant, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

> (1) *Reopen prosecution.* Submit an appropriate amendment of the claims so rejected or new evidence relating to the claims so rejected, or both, and have the matter reconsidered by the Examiner, in which event the proceeding will be remanded to the Examiner. . . .
>
> (2) *Request rehearing.* Request that the proceeding be reheard under
> § 41.52 by the Board upon the same record. . . .

For the forgoing reasons, will not sustain the Examiner's rejection of claims 1 and 3 through 14 under 35 U.S.C. § 101 or the Examiner's rejection of claims 1, 3 through 15, 17 through 29 and 31 through 42 under 35 U.S.C. § 103(a). The decision of the Examiner is reversed. Further, we enter a new grounds of rejection under 37 CFR § 41.50(b) of, claims 1, 3 through 15, 17 through 29 and 31 through 42.

REVERSED, 37 CFR § 41.50(b)

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